

A3 sequence according to claim 1, wherein the presence of a nucleic acid sequence according to claim 1 indicates the presence of E. coli serotypes O157:H7; O157:NM or O55:H7 in the sample.

11. (Amended) A method of detecting the presence of E. coli serotypes O157:H7; O157:NM or O55:H7 in a sample comprising (a) isolating nucleic acid from the sample; (b) amplifying the isolated nucleic acid with a primer having a sequence that is complimentary to a portion of a nucleic acid sequence according to claim 1 and (c) assaying for amplified sequences, wherein the presence of an amplified sequence indicates that the sample contains E. coli serotypes O157:H7; O157:NM or O55:H7.

A3 13. (Amended) A method according to claim 11 wherein the nucleic acid is amplified in step (b) using a Polymerase Chain Reaction.

14. (Amended) A method of detecting the presence of a nucleic acid molecule associated with E. coli serotypes O157:H7; O157:NM and O55:H7 in a sample comprising (a) contacting the sample under hybridization conditions with one or more of nucleotide probes which hybridize to nucleic acid molecules according to claim 1 and (b) determining if there is hybridization between the nucleic acid molecules in the sample and the nucleotide probes, wherein the presence of hybridization indicates that the sample contains E. coli serotypes O157:H7; O157:NM or O55:H7.

A4 19. (Amended) A microchip comprising a nucleic acid molecule according to claim 1 attached to a microchip.

20. (Amended) A microchip comprising a nucleotide probe according to claim 5 attached to a microchip.